

Title (en)  
Vacuum cleaner filter bag

Title (de)  
Staubsaugerfilterbeutel

Title (fr)  
Sac d'aspirateur

Publication  
**EP 2311360 A1 20110420 (DE)**

Application  
**EP 09013176 A 20091019**

Priority  
EP 09013176 A 20091019

Abstract (en)  
The bag (101) has a wall (104) with a calendered non-woven fabric layer formed as a melt-spun microfiber non-woven fabric layer, where the fabric layer is calendered using thermal energy or ultrasonic waves. The fabric layer has a surface area of 120 grams per square meter and maximum force of more than 60 Newton in a machining direction and more than 50 Newton in a transverse direction. Thickness of the fabric layer is in the range of 0.4 to 0.8 mm, where the fabric layer is made of polymer, polypropylene and biologically degradable plastic e.g. polylactide.

Abstract (de)  
Die Erfindung umfasst einen Staubsaugerfilterbeutel mit einer Beutelwand, wobei die Beutelwand genau eine Vliesstofflage in Form einer schmelzgesponnenen Mikrofaservliesstofflage umfasst.

IPC 8 full level  
**A47L 9/14** (2006.01)

CPC (source: EP US)  
**A47L 9/14** (2013.01 - EP US)

Citation (search report)

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- [XII] EP 1212971 A2 20020612 - VORWERK CO INTERHOLDING [DE]
- [XDII] WO 2005107557 A1 20051117 - FIBERMARK GESSNER GMBH & CO [DE], et al
- [XII] DE 10064608 A1 20020411 - VORWERK CO INTERHOLDING [DE]
- [XDII] EP 0161790 A2 19851121 - MINNESOTA MINING & MFG [US]
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Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

Designated extension state (EPC)  
AL BA RS

DOCDB simple family (publication)  
**EP 2311360 A1 20110420; EP 2311360 B1 20140903;** AU 2010310184 A1 20120524; AU 2010310184 B2 20130711; CN 102665516 A 20120912; CN 102665516 B 20150114; DK 2311360 T3 20141006; ES 2508265 T3 20141016; PL 2311360 T3 20150227; RU 2012116601 A 20131127; RU 2526777 C2 20140827; US 2012216493 A1 20120830; US 8979961 B2 20150317; WO 2011047765 A1 20110428

DOCDB simple family (application)  
**EP 09013176 A 20091019;** AU 2010310184 A 20100921; CN 201080053011 A 20100921; DK 09013176 T 20091019; EP 2010005779 W 20100921; ES 09013176 T 20091019; PL 09013176 T 20091019; RU 2012116601 A 20100921; US 201013502176 A 20100921